AMENDED CLAIMS

34. (Currently Amended). An improved supplemental restraint system for a vehicle comprises a vehicle seat occupant's weight detection means and classification system configured with sensor means operatively secured between at least one seat mounting means and the floor means of a vehicle for measuring occupant's weight to enable controlling applicable airbag deployment force for at least an airbag associated with at least a seat, at least a human body temperature sensor is associated with the sensor means for separating body weight from luggage and a control means communicatively connected to the detection means and classification system and communicatively connecting an erasable programmable read only memory "EPROM" configured for correcting and changing said measured weight based on external conditions and/or changing occupants to effectively controlling the detection and classification data to enable whether to effectively allow/not to allow said airbag deployment for the occupied seat base on at least a measured parameter, wherein said measured parameter further includes at least one or a combination of occupant's weight, vehicle speed, and a collision force, and said detection means further comprising at least a sensor circuitry communicatively connected to said sensor means representing a detection platform disposed with the sensors respectively responsive for said measured parameters and for characterizing output signals from a plurality of said sensors responsive for maximizing occupant's protection within a vehicle having at least an air bag, front end collision sensor, rear end collision sensor, rollover collision sensor, and side impact collision sensor, comprising:

a weight-sensing unit operatively secured beneath at least one seat in said vehicle; a computerized system communicatively connecting said unit to a supplemental restraint system installed in said vehicle, said supplemental restraint system comprising at least one airbag system each having at least one airbag, each said airbag system corresponding to one of said seats; said weight-sensing unit being configured for taking weight measurements of an occupant in a said seat, converting said weight measurements into one or more electrical signals, and communicating said electrical signals to said computerized system; said computerized system being programmably configured to calculate an operating weight value from said electrical signals corresponding to said weight measurements for each said seat and to communicate said operating weight value to said airbag system corresponding to said seat; each said airbag system being electronically configured for receiving said operating weight value for said seat and for mechanically adjusting a deployment unit within said airbag system to deploy said at least one airbag with a deployment force and acceleration for airbag inflation that are proportionate to said weight measurements; the seat sensor means comprises said weight sensing unit operatively connected to said temperature sensor and disposed between the seat mounting structure means and the floor means of a vehicle for identifying when an occupant is seated within the said vehicle seat and measuring the occupant's weight thereon; at least a seatbelt tension sensor disposed on to a seatbelt corresponding to one said seat, said seatbelt sensor being electrically connected to said control means, and at least one corresponding airbag sensor disposed on said air bag operatively connected to said airbag system having at least a gas canister, said seatbelt sensors and said airbag sensors being configured to communicate to each other regarding the proximity of sensing surfaces on said airbag sensor against said seated occupant, and said airbag system being configured to direct the volume of gas flow to trigger deployment of said airbag system corresponding to each seat occupied by said seated occupant; said airbag sensor secured to at least a vehicle by a fastener, a first communication device such as a collision sensor arranged in the vehicle front end, and a second communication device such as a rear collision sensor arranged in the vehicle rear end, the rear end collision sensor and the front end collision sensor communicatively connected to multiple collision sensors operatively connected to said control means for communicating collision severity to said airbag system, said airbag system further configured to process information corresponding to said severity to determine variable deployment force and acceleration for airbag inflation proportionate to said weight measurement and to said severity.

35. (Currently Amended). The improved supplemental restraint system of Claim 34 wherein said weight sensing unit comprises a load cell and wherein said vehicle occupant detection means and classification system responsive for controlling the resistance of a restraint device, such that in an accident, an occupant of a vehicle impacts the device without injury; further comprising:

a. determining a weight value of the occupant;

b. calculating a restraint force based upon the weight value of the occupant and a collision force;

c. a collision force sensor in communication with said computer system; and

d. a restraint device, in communication with said computer system; and

e. means for controlling said restraint device , wherein the restraint device is rendered of sufficient tension to keep the occupant on a seat when a collision is sensed, but is not rendered of sufficient tensile force to cause impact injury to the occupant.

36 (Original). The improved supplemental restraint system of Claim 35 wherein said load cell comprises at least one strain gauge configured to sense a force applied to it when said occupant occupies said seat, each said gauge comprising electrical resistance elements configured to detect and measure resistance occurring when external strain is applied to said gauge, wherein said external strain corresponds to said force from said occupant and is converted into a corresponding electrical current for communicating said electrical signals.

37. (Original). The improved supplemental restraint system of Claim 34 wherein said computerized system comprises a control module electronically connected to a central processing unit, said control module programmably configured to identify each said seat for which said weight measurements are taken and to activate said airbag system corresponding to each said seat for which said weight measurements exceed a minimum weight threshold value generally corresponding to the weight of a small child.

38 (Currently Amended). The improved supplemental restraint system of Claim 37 wherein said minimum weight threshold value is about 20 pounds and wherein said occupant sensing means being in signal communication with said computerized system.

39 (Currently Amended). The improved supplemental restraint system of Claim 37 wherein said control module comprises a control means ~~is~~ configured to receive analog electric line signals from said weight sensing unit regarding said weight measurements, said control module further being configured to convert said analog signals to digital signals corresponding to said analog signals.

40 (Original). The improved supplemental restraint system of Claim 39 wherein said control module is further configured to convert said digital signals to binary signals corresponding to said analog signals and suitable for use with a plurality of transistorized switches that comprise said central processing unit for processing said weight measurements as said binary signals and communicating said operating weight value calculated therefrom.

41 (Original). The improved supplemental restraint system of Claim 37 wherein said central processing unit comprises read only memory having a basic input-output system for storing said weight measurements communicated from said control module, said central processing

unit further comprising random access memory, said read only memory storing a software program that utilizes said random access memory, said software program being programmed to use said random access memory for accessing said weight measurements from an address line in said basic input-output system and for calculating said operating weight value.

42 (Current Amended). The improved supplemental restraint system of Claim 34 wherein said deployment unit comprises said airbag system configured with a combustion chamber operatively connected to a canister of igniting gas, a microprocessor configured to receive said operating weight value communicated from said computerized system, said microprocessor electronically connected to an accelerometer, said accelerometer electronically connected to said canister and operatively connected to said combustion chamber.

43 (Currently Amended). The improved supplemental restraint system of Claim 42 wherein said accelerometer is electronically connected to said canister by a canister microprocessor electronically connected to a gas release valve relay and an igniter, said gas release valve relay being connected to a release valve operatively connected to said canister between said canister and said combustion chamber, said detection platform comprising means for providing signals indicative of the airbag either is to be deployed or is not be deployed based on the signal strength from at least a collision sensor and/or the seat sensor means .

44 .(Currently Amended). The improved supplemental restraint system of Claim 42 wherein said accelerometer comprises at least one piezoelectric crystal operatively connected to a mass in contact with a spring, said spring operatively connected to a sliding pot secured to said combustion chamber, said sliding pot configured to adjust an opening in said combustion

chamber for expansion of ignited gas from said canister into said at least one airbag, said accelerometer configured to deliver a first signal corresponding to said operating weight value to said gas canister, said canister communicatively connected to said microprocessor configured to process said first signal and deliver to at least a gas release valve relay a second signal corresponding to a specific volume of gas to be released from said canister through said release valve into said combustion chamber, said specific volume comprising the predetermined amount of said gas required to generate said variable deployment force and acceleration for airbag inflation that are proportionate to said weight measurements .

45 (Original). The improved supplemental restraint system in Claim 44 wherein said microprocessor is configured to translate said operating weight value received from said computerized system into an electric current proportional to said weight measurements and to energize said at least one crystal with said proportional current, said energized crystal configured with said mass for translating energy of said proportional current to mechanical energy for displacing said mass and correspondingly compressing said spring for adjustment of said sliding pot a degree proportional to said weight measurements.

46 (Currently Amended). The improved supplemental restraint system of Claim 43 wherein said accelerometer is configured to deliver a first signal corresponding to said operating weight value to said canister microprocessor, said canister microprocessor configured to process said first signal and deliver to said gas release valve relay a second signal corresponding to a specific volume of gas to be released from said canister through said release valve into said combustion chamber, said specific volume comprising the amount of said gas required to generate said deployment force and acceleration for airbag inflation that are proportionate to

said weight measurements, and said accelerometer further comprising a spring means for calibrating the airbag deployment force.

47 (Currently Amended). The improved supplemental restraint system of Claim 46 wherein said accelerometer comprises at least one piezoelectric crystal operatively connected to a mass in contact with a said spring means, said spring means operatively connected to a sliding pot means secured to said combustion chamber, said sliding pot configured to adjust an opening in said combustion chamber for expansion of ignited gas from said canister into said at least one airbag, said specific volume of gas and said opening defined by said sliding pot means are calibrated together such that said opening and said volume generate said deployment force and acceleration when said volume is ignited by said igniter when a collision sensor operatively connected to said vehicle senses a collision has occurred of a severity requiring airbag deployment.

48 (Currently Amended). The improved supplemental restraint system of Claim 34 further comprising a collision sensor operatively connected to said computerized system configured with said accelerometer communicatively connected to said gas canister for adjusting an opening in said combustion chamber responsive for expansion of igniting gas from said canister into said at least one airbag .

49 (Original). The improved supplemental restraint system of Claim 34 further comprising a collision sensor operatively connected to said deployment unit.

50 (Original). The improved supplemental restraint system of Claim 48 or Claim 49 wherein said collision sensor is configured to signal for deployment of airbags in response to a threshold collision severity.

51 (Original). The improved supplemental restraint system of Claim 48 or Claim 49 wherein said collision sensor is configured to signal for deployment of airbags in response to a threshold collision severity, said threshold collision severity comprising a collision substantially equivalent to said vehicle traveling between about 10 m.p.h. and about 15 m.p.h. and hitting a substantially rigid wall.

52 (Currently Amended). The improved supplemental restraint system of Claim 34 wherein said computerized system is configured with means to temporarily store said weight measurements and erase said weight measurement for one said seat when said occupant leaves said seat and to store newly taken weight measurements when said occupant or a new occupant occupies said seat.

53 (Currently Amended). The improved supplemental restraint system of Claim 34 further comprising a smart seat belt system having a seat belt processor within the computerized system configured to disable said vehicle from starting or running if one or more seat belts for said seats are not worn by an occupant in said seats, said smart seatbelt comprising means for controlling the resistance of a seat belt, such that in an accident, an occupant of a vehicle impacts the seat belt without injury, said detection means further including sensors disposed between the floor means and the seat mounting structure means of the vehicle responsive for measuring the occupant's actual weight and enabling signal communication there from and operatively configured with a control means communicatively connected to said seatbelt means responsive for enabling tensioning of at least a seatbelt associated with at least said seat; further comprising:

a. a pressure sensing device operatively configured with the detection means responsive for determining a weight value of the occupant;

b. a control means communicatively configured with said pressure-sensing device, said control means calculating a coil value based upon the weight value of the occupant and a collision force according to the vehicle speed;

c. a collision force sensor communicatively configured with said seat belt device and operatively configured with the control means;

d. a coil tensioner operatively configured with said seat belt means and communicatively connected to said control means, said coil tensioner responsive for rotating a moveable coil per coil value; and

e. said control means controlling the seatbelt tension, wherein the seatbelt is rendered of sufficient tension to keep the occupant on a seat when a collision is sensed, but is not rendered of sufficient tension to cause impact injury to the occupant.

54. (Original). The improved supplemental restraint system of Claim 34 wherein said weight sensing unit comprises an inflatable bag mounted within a bottom cushion for said seat or mounted beneath said seat, said inflatable bag configured to inflate or deflate an amount corresponding to the weight of said occupant, a relay valve being operatively connected to said bag, said valve configured to measure and record the amount of deflation or inflation of said bag and to transform said amount into a weight measurement and communicate said weight measurement electronically to said computerized system.

55. (Original). The improved supplemental restraint system of Claim 54 wherein said deployment force and acceleration corresponds to said amount of deflation or inflation of said bag.

56. (Original). The improved supplemental restraint system of Claim 34 wherein said weight sensing unit comprises a weight measuring capacity of up to about 1,000 pounds.

57. (Original). The improved supplemental restraint system of Claim 34 further comprising a signal amplifier, said amplifier configured to amplify at least one of analog, digital and binary electronic signals transmitted within said improved supplemental restraint system.

58. (Original). The improved supplemental restraint system of Claim 34 further comprising a transient voltage suppressor electronically connected to the computerized system, said suppressor configured to filter or diminish transient voltage spikes that have potential for damage within the

computerized system or to cause abnormal readings or communications within the computerized system.

59. (Original). The improved supplemental restraint system of Claim 34 further comprising one or more rear end collision sensors mounted to the rear of said vehicle, said rear end collision sensors configured for sensing a collision at the rear of said vehicle and electrically communicating with said computerized system the severity of such a collision, said computerized system being further configured to receive and process such communication from said rear end collision sensors and trigger deployment of said airbag systems corresponding to each said seat occupied by a said occupant.

60. (Original). The improved supplemental restraint system of Claim 59 wherein said rear end collision sensor comprises a radar unit, said radar unit communicating with a radar receiver operatively connected to said computerized system.

61.(Original). The improved supplemental restraint system of Claim 59 wherein said computerized system is configured to communicate severity of a rear end collision sensed by said rear end collision sensor to said airbag system, said airbag system being further configured to process information corresponding to said severity to determine deployment force and acceleration for airbag inflation proportionate to said weight measurements and to said severity.

62. (Original). The improved supplemental restraint system of Claim 34 wherein at least one said airbag comprises a double-layer construction, said construction comprising an internal layer configured for receiving inflation of said airbag, and an external layer comprising a cushioned outer surface, said internal layer and said external layer defining an air gap therebetween.

63. (Original). The improved supplemental restraint system of Claim 34 further comprising at least one seat belt sensor mounted to a seat belt corresponding to one said seat, said seat belt sensor being electrically connected to said computerized system, and at least one corresponding airbag sensor mounted to said airbag and operatively connected to said airbag system, said seat belt sensors and said airbag sensors being configured to communicate with each other regarding the proximity of sensing surfaces on said seat belt sensor and said airbag sensor, said airbag system being configured to direct deployment of said airbag so that initial contact of an inflated said airbag against said occupant is approximately at said seat belt sensor and said airbag sensor.

64. (Original). The improved supplemental restraint system of Claim 63 wherein said seat belt sensors and said airbag sensors comprise either proximity sensors or signal transmitter couplers, said sensors or couplers being configured to communicate with each other and generate solid state switch outputs when said sensing surfaces are near each other upon deployment of said airbag.